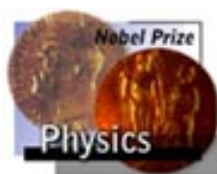




NOBEL PRIZE WINNERS

Supported by ARO

Since 1901 the Nobel Prize is annually awarded for achievements in physics, chemistry, medicine, literature, and peace. On December 10th, the anniversary of Alfred Nobel's death, the Nobel prize is presented to laureates during a ceremony in Stockholm, Sweden. The Army Research Office sponsored the work of many Nobel laureates over the years and their research has dramatically impacted our national defense. Listed below are ARO sponsored Nobel laureates.



The Nobel Prize in Physics - Laureates

2001 - Eric A. Cornell, Wolfgang Ketterle, Carl E. Wieman

2000 - Herbert J. Kroemer, Zhores I. Alferov

1998 - Daniel Tsui

1996 - David M. Lee

1989 - Hans Dehmelt

1981 - Arthur L. Schawlow, Kai M. Siegbahn, Nicolaas Bloembergen

1973 - Leo Esaki, Brian D. Josephson

1972 - John Bardeen, Leon Cooper, John Robert Schrieffer

1964 - Charles H. Townes

1955 - Polykarp Kusch, Willis E. Lamb



The Nobel Prize in Chemistry- Laureates

2000 - Alan J. Heeger, Alan G. MacDiarmid

1996 - Richard E. Smalley, Robert F. Curl

1994 - George A. Olah

1987 - Donald J. Cram

1979 - Herbert C. Brown

1976 - William N. Lipscomb

1967 - George Porter

1966 - Robert S. Mulliken

1965 - Robert Burns Woodward



The Nobel Prize in Physics 2001

"For the achievement of Bose-Einstein condensation"

Eric A. Cornell

USA

University of Colorado
Boulder, CO

Wolfgang Ketterle

Germany

Massachusetts Institute of
Technology (MIT)
Cambridge, MA

Carl E. Wieman

USA

University of Colorado
Boulder, CO



The Nobel Prize in Physics 2000

"For developing semiconductor heterostructures used in high-speed and opto-electronics"

Herbert Kroemer

Germany

University of California
Santa Barbara, CA

Zhores I. Alferov

Russia

A.F. Ioffe Physico-Technical Institute
St. Petersburg, Russia



The Nobel Prize in Physics 1998

"New Forms of Quantum Fluid with Fractionally Charged Excitations"

Daniel C. Tsui

USA

Princeton University

Princeton, NJ



The Nobel Prize in Physics 1996

"Discovery of Superfluidity"

David M. Lee

USA

Cornell University

Ithaca, NY



The Nobel Prize in Physics 1989

"Ion Trap Technique (Precision Timing and Location)"

Hans G. Dehmelt

USA

University of Washington

Seattle, WA



The Nobel Prize in Physics 1981

"Solid State Laser (Laser Spectroscopy)"

"Development of High-Resolution Electron Spectroscopy"

"Non-Linear Optics"

Arthur Schawlow

USA

Stanford University

Stanford, CA

Kai M. Siegbahn

Sweden

Uppsala University

Uppsala, Sweden

Nicolaas Bloembergen

USA

Harvard University

Cambridge, MA



The Nobel Prize in Physics 1973

"Electron Tunneling "

"Predictions of the properties of super current through a tunnel barrier"

Leo Esaki

Japan

IBM Thomas J. Watson Research Center
Yorktown Height, NY

Brian David Josephson

United Kingdom

University of Cambridge
Cambridge, UK



The Nobel Prize in Physics 1972

"For their jointly developed theory of superconductivity"

John Bardeen

USA

University of Illinois
Urbana, IL

Leon Neil Cooper

USA

Brown University
Providence, RI

John Robert Schrieffer

USA

University of Pennsylvania
Philadelphia, PA



The Nobel Prize in Physics 1964

"For fundamental work in the field of quantum electronics, which has led to the construction of oscillators and amplifiers based on the maser-laser principle"

Charles Hard Townes

USA

Massachusetts Institute of
Technology (MIT)
Cambridge, MA



The Nobel Prize in Physics 1955

"For his precision determination of the magnetic moment of the electron"

"Discoveries concerning the superfine structure of the hydrogen pectrum using microwave excitations"

Polykarp Kusch

USA

Columbia University

New York, NY

Willis E. Lamb

USA

Stanford University

Stanford, CA



The Nobel Prize in Chemistry 2000

"For the discovery and development of conductive polymers"

Alan J. Heeger

USA

University of California

Santa Barbara, CA

Alan G. MacDiarmid

USA

University of Pennsylvania

Philadelphia, PA



The Nobel Prize in Chemistry 1996

"For their discovery of fullerenes"

Richard E. Smalley

USA

Rice University

Houston, TX

Robert F. Curl Jr.

USA

Rice University

Houston, TX



The Nobel Prize in Chemistry 1994

"For his contribution to carbocation chemistry"

George A. Olah

USA

University of Southern

California

Los Angeles, CA



The Nobel Prize in Chemistry 1987

"Development and use of molecules with structure-specific interactions of high selectivity"

Donald J. Cram

USA

University of California
Los Angeles, CA



The Nobel Prize in Chemistry 1979

"Development of the use of boron and phosphorus compounds"

Herbert C. Brown

USA

Purdue University
West Lafayette, IN



The Nobel Prize in Chemistry 1976

"For his studies on the structure of boranes illuminating problems of chemical bonding"

William N. Lipscomb

USA

Harvard University
Cambridge, MA



The Nobel Prize in Chemistry 1967

"Studies of extremely fast chemical reactions effected by disturbing the equilibrium by means of very short pulses of energy"

George Porter

United Kingdom

Royal Institution of Great
Britain

London, UK



The Nobel Prize in Chemistry 1966

"For his fundamental work concerning chemical bonds and the electronic structure of molecules by the molecular orbital method"

Robert S. Mulliken

USA

University of Chicago
Chicago, IL



The Nobel Prize in Chemistry 1965

"For his outstanding achievements in the art of organic synthesis"

Robert Burns Woodward

USA

Harvard University

Cambridge, MA